

The Effects of Gender-based Violence on Women's Unwanted Pregnancy and Abortion

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The aim of this research is to understand how gender-based violence across the life-course affects the likelihood of abortion. Women outpatients ($n = 309$) revealed their exposure to four different forms of gender-based abuse: child sexual abuse (25.7 percent), teenage physical dating violence (40.8 percent), intimate partner violence (43.1 percent), and sexual assault outside an intimate relationship (22 percent). Logistic regressions revealed that no single form of gender-based abuse predicted abortion. The cumulative effect of multiple forms of abuse did increase the odds of having an abortion (OR = 1.39, CI = 1.13-1.69). Child sexual abuse predicted intimate partner violence (OR = 6.71, CI = 3.36-13.41). The cumulative effect of gender-based violence on women's reproductive health warrants further research. Priority should be given to screening for multiple forms of victimization in reproductive healthcare settings.

The term “gender-based violence” (GBV†) applies to the sexual or physical abuse of groups targeted because of their gender or gender roles and relegated to a lower position of social status or power. The United Nations’ Office of the High Commissioner for Human Rights’ Committee on the Elimination of Discrimination against Women (CEDAW) in its General Recommendation 19 defines gender-based violence as: “violence that is directed against a woman because she is a woman or that affects women disproportionately [1].” Sexual minorities often face gender-based violence, although the sheer number of women who are attacked because of their sex exceeds that of any other group. Examples of gender-based violence include sexual abuse across the life-course and intimate partner violence (IPV). In one meta-analysis of more than 20 retrospective studies researchers concluded that child sexual abuse was prevalent in 30 percent of women and 12 percent of men [2]. At least one in five adolescent girls are victims of dating violence [3]. According to the Centers for Disease Control 18.3 percent of American women surveyed attested to at least one episode of coerced vaginal penetration which generates a statistic translating to 21,840,000 lifetime U.S. rape victims [5]. In summary, violence against

girls and women is widespread, potentially derailing women's health and reproductive freedom.

Gender-based violence threatens women's health worldwide adding to the global burden of disease [4,6,7]. In one Australian study researchers interviewed reproductive aged women (15 to 44) to discover that IPV accounted for 7.9 percent of *all* their health problems, surpassing smoking (1 percent) or illicit drug use (3.5 percent) [8]. IPV is associated with behavioral and mental health conditions, notably substance use and depression [9,11] and has gained recognition in the United States within health care settings [9]. Nearly one in five women outpatients surveyed in urban hospitals reported past-year exposure to IPV [10]. Young women are especially vulnerable with 54 percent of rapes occurring before the age of 21 [5]. Moreover it is estimated that among women in violent relationships in their twenties and thirties half experience forced sexual intercourse from an abusive partner [5]. The concomitant risk for victimization and unwanted pregnancy highlights the need to understand and document the role gender-based violence may have in abortion.

Gender-based violence has a harmful impact on reproductive health. Among the adverse outcomes associ-

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†Abbreviations: GBV, gender-based violence; IPV, intimate partner violence; CSA, child sexual abuse; CEDAW, Committee on the Elimination of Discrimination against Women.

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ated with GBV are: early teenage childbearing [12] for incest victims, rapid repeat pregnancies during adolescence [13] for sexually and physically abused teenagers, abortion [13], and sexually transmitted infections for college women with abusive partners [14]. IPV in adulthood is associated with more unwanted pregnancies and abortions [15] and adverse birth outcomes extending to neonatal prematurity, low-birth weight and Neonatal Intensive Care Unit (NICU) [16]. According to one study of young women electing an abortion, 39.5 percent revealed past year IPV [17]. Conflicts over methods and use of contraception are common in abusive unions [19], with one meta-analysis showing that IPV reduces the odds of using *any* form of contraception [20]. Abusive partners sometimes try to manipulate reproductive outcomes as part of their efforts at control – from sabotaging contraception to physically assaulting pregnant women with the aim of inducing miscarriage [21,22]. Adolescents are especially at risk, and more than half of teenage and young adult women experience partner interference with birth control and access to reproductive services [22]. Adolescent girls in violent dating relationships shoulder a disproportionate burden of unwanted pregnancy and abortion [23]. Women's control of the timing of pregnancy is seen as a human rights issue recognized by the United Nations Millennium project [1].

The aim of the present investigation is to ascertain whether and how gender-based abuse such as child sexual abuse or intimate partner violence increases the odds of an abortion. Individual forms of abuse are tested in addition to compounded forms. Many studies measure a single form of gender-based violence at only one point in time, although different forms of gender-based violence are often inter-related. There is an insidious pattern of re-experiencing gender-based violence across the life-course: for instance, in one large-scale study of adult sexual assault victims, 60 percent disclosed child sexual abuse [24]. Women in abusive relationships are significantly more likely to recount teenage “dating” violence, and continuity between dating violence in the teenage years and subsequent relationship violence in young adulthood was confirmed in a large prospective study [25]. As gender-based violence accrues across the life-course, women's risk for unwanted pregnancy increases in the same way that multiple childhood hardships measured in other studies exert a cumulative effect on general health. Although the percent of women having an abortion has declined over the past decade, rates still remain the highest of all high-income countries in the Organization of Economic and Cooperative Development (OECD). Only 1.5 percent of all abortions are in response to an unwanted pregnancy due to rape or incest, yet one in five women who seek abortion disclose past sexual assault [9]. The potential link between gender-based violence and women's low fertility control leading to abortion warrants further study.

MATERIALS AND METHODS

This cross-sectional study was performed after full Internal Review Board review and approval by the Harvard University (T.C. Chan) School of Public Health, where the first author served on the faculty at the time. Participants aged 18 to 59 were recruited from eight different hospital-based departments in Metropolitan Boston which served extensive catchment areas. Recruitment sites were in emergency medicine ($n = 908$), obstetrics/gynecology ($n = 895$), primary care ($n = 280$), addiction treatment ($n = 79$), and pediatrics ($n = 303$) in which we targeted exclusively mothers. Survey research assistants approached women outpatients ($n = 4,245$) in waiting areas and asked to fill out a short survey in which 10 questions about past-year exposure to intimate partner violence were embedded. Women were, therefore, not hospital inpatients at the time of the survey. A total of 2,465 surveys (62 percent) were collected with 97 percent in English and the remainders in Russian, Spanish, Haitian Creole, or Chinese.

Criteria for interview study participation included age (18 to 59 years) and relationship status (live-in relationship with a male partner during the past year). Sixty-percent of patients who completed a survey listed contact information for subsequent in-person interviews, and participants were selected for scheduling through random number generation. Interviews were completed with women who disclosed past-year exposure to intimate partner violence ($n = 65$) and women without past year abuse exposure ($n = 176$). Further canvassing in the same medical settings was performed to recruit additional women with past-year abuse resulting in 132 abused women and 176 controls. Interviewers were blind to the violence history of respondents until the end of the interview. Participants received compensation and round-trip transportation; interviews were re-scheduled up to three times in the case of no-shows to reduce self-selection bias. The source of data for the present analysis is from these 308 in-person interviews.

MEASUREMENT

Dependent Variable

Abortion. Interviewers asked “have you ever had an abortion?” and if yes “how many and when was the last procedure?” Whether women had had an abortion and how many abortions were coded as two distinct variables.

Independent Variables

Demographics. Personal characteristics which are related to unwanted pregnancy were measured and coded as dichotomous variables: education (incomplete high school, completed), U.S. born (born in the U.S. and territories or not), race (African-American, or other). African-American was distinguished because research has shown

a heightened likelihood of abortion among African-Americans. Age was retained as a continuous variable.

Child maltreatment. For the purposes of this analysis child emotional and physical abuse is used as a “control” for traumatic history. As a control for gender-based forms of abuse, therefore, the retrospective Child Traumatic Questionnaire was administered, omitting sexual abuse items which are included under the child sexual abuse classification [27]. Items included “punishments I received seemed cruel” and “someone in the family yelled and screamed at me.”

Gender-based violence. Four different expressions of gender-based violence were assessed pertaining to different points in the lives of the women. Child sexual abuse (CSA) was assessed including both incest and non-familial abuse, together with teenage dating violence, adult intimate partner violence at any time after the age of 19, and sexual assault at any time after the age of 15 (sexual assault at 15 and before is counted as child sexual abuse as described below).

Child sexual abuse (CSA). Women were classified as having experienced CSA if they answered affirmatively to any one of three questions from validated instruments, two focusing on incest “while growing up (before age 12)” [27] and one on sexual assault with penetration before the age of sixteen by anyone inside or outside the family [28]. Women were asked whether “someone in the family molested me [them]” or whether they were “raped by someone in the family.” Massachusetts statutes designate child sexual abuse when a child is forced to have sexual intercourse under the age of 16. Therefore if women answered affirmatively that they experienced rape, as assessed with a standardized questionnaire item cited below, before the age of 16 they were also coded as sexually abused in childhood. Therefore two dimensions of child sexual abuse made up this measure: nuclear or extended family incest ranging from molestation to intercourse, and extra-familial sexual assault before the age of 16.

Sexual assault. Sexual assault measurement included forced sex with a partner or non-partner, and specifically with a regular sexual partner to cover relationship sexual violence. The single item from a validated instrument for coerced sex is: “Has a man (excluding your current partner forced you to have sexual intercourse when you did not want to by using some degree of physical force like twisting your arm or holding you down?” [28] Women were asked the frequency and their age at the time of the assault(s). Whether a woman was assaulted was coded as 0, 1 even if there were multiple incidents. In addition, women were asked whether their current or past partners during adulthood or adolescence “use physical force to make you have sexual intercourse?” This item, derived from the Conflict Tactics Scale [29], was asked for three different relationship periods and was excluded from the measurement of physical dating or intimate partner vio-

lence. A positive response to any of these four questions resulted in a positive value for sexual assault.

Adolescent dating violence. Women were asked about victimization during their teenage years and an affirmative response to any of the four items for this time period was coded as a positive score for teenage dating violence. The four items adapted from the Conflict Tactics Scale [28] pertained to physical abuse or threats: “...before the age of 20 did a man you were dating ever (1) hit, slap, push or shove you? (2) beat you, for a number of minutes? (3) threaten you with a gun or knife? (4) behave violently towards you while you were pregnant?”

Past and current history of intimate partner violence. A history of violent relationships and current partner abuse was combined to indicate women’s exposure to physical abuse in intimate relationships across their life-course. The same questions pertaining to adolescent violence were used to ask women about partners they had after the age of twenty, such as “...after the age of 20 did a man you were dating ever (1) hit, slap, push or shove you? (2) beat you, for a number of minutes? (3) threaten you with a gun or knife? (4) behave violently towards you while you were pregnant?” The same items were selected for current partners. Although the items from the Conflict Tactics Scale (CTS) were limited to physical violence [28] the Women’s Experience with Battering questionnaire (WEB) was used additionally to measure psychological intimidation and abuse in the *current* relationship [30]. Therefore, current IPV (past year) was assessed using the CTS [28] and the Women’s Experience with Battering Scale (WEB). Physical violence items were merged with psychological abuse (WEB) to create an intimate partner violence exposure score.

Summary. The present interview study assessed gender-based violence in women’s lives including child sexual abuse and intimate partner violence. In addition, women provided information about their reproductive health: contraception, unwanted pregnancy and abortion history, low weight births, and sterilization. The focus of the present analysis is on pregnancy termination. The main questions include: Are women with any of four abuse experiences (CSA, teen dating violence, IPV, sexual assault) more likely to receive an abortion than women without such experiences? Is there a cumulative cost to experiencing multiple forms of abuse which raises the odds of an unwanted pregnancy?

RESULTS

Findings include descriptive statistics, univariate tests of association and logistic regression models with odds ratios with the use of SAS 9. As many as 25.7 percent reported child sexual abuse and 40.8 percent experienced teenage dating violence; 3.1 percent described abusive adult relationships, and 22 percent experienced sexual assault after the age of 15. During the year preceding the in-

Table 1. Logistic regression predicting the odds of adult IPV from childhood sexual abuse with sociodemographic covariates

	Odds Ratio (OR)	<i>p</i> -value	95% Confidence Interval (CI)	
			Lower	Upper
Child Sexual Abuse	6.71	.00	3.36	13.41
Race (African-American)	.93	.81	.51	1.7
Education (Completed high school)	.43	.00	.28	.66
Receipt of Federal Assistance	3.1	.00	1.65	5.83
U.S. born	1.43	.31	.71	2.88

interview 52 percent were in an abusive relationship, confirming the receipt of at least one incident of partner violence or an elevated score on the WEB. Many also had elevated scores on the Childhood Trauma Questionnaire ($M = 22.22$, $SD = 8.75$, range 10-48), and 11.3 percent ($n = 35$) were placed into foster care. The mean age of entry into foster care was 11.6 years ($SD = 3.8$) which signals child sexual abuse as the potential cause, and indeed cross-tabulations of child sexual abuse and foster care placement showed high concordance with 60 percent of those placed in foster care confirming sexual abuse in childhood or adolescence. Demographic characteristics included age ($M = 32.8$, $SD = 10.7$), race or ethnicity (41.5 percent African-American, 10.4 percent Latina, 48 percent White non-Hispanic, Asian or Other), education (19.4 percent failed to graduate from high school, 40.8 percent finished high school but not college, and 39.8 percent with a college or graduate degree).

Forty-three percent ($n = 133$) of the women had an abortion at some point in their lives. Among those verifying an abortion about a third ($n = 39$) occurred during adolescence. The youngest age at first abortion was thirteen; the median age was 21 years. The average number of intervening years between the interview and the most recent abortion was eight years. Nineteen percent had three or more children. The mean number of abortions among those women who reported having any was 2.2 ($SD = 1.6$). Nearly half of women positive for an abortion disclosed more than one: 32.3 percent ($n = 43$) reporting two and 14.4 percent ($n = 29$) indicating three or more abortions. Among the 29 women reporting three or more abortions more than half ($n = 19$) had received four or more ranging up to ten. At the time of the interview, women's average age was 32.8 ($SD = 10.7$) years. IPV affected 52 percent of the sample at some point after the age of twenty. Nearly a third of the women disclosed child sexual abuse (29 percent) and more than 85 percent of the women indicating CSA were victims of incest.

The hypothesis that gender-based violence maintains continuity across a woman's life-course was confirmed with a series of non-parametric tests (Pearson's chi-

square). Child sexual abuse was associated with adult IPV $\chi^2(df\ 1) = 28.5$, $p < .0001$: 68.3 percent of women sexually abused in childhood had violent relationships in adulthood and 33.9 percent of women without sexual abuse histories had a violent partner. Moreover, 40.9 percent of women disclosing IPV had a history of child sexual abuse, mainly incest. Child sexual abuse was significantly related to later teenage dating violence, $\chi^2(df\ 1) = 11.51$, $p = .0007$, with 56.9 percent of women who were sexually abused in childhood recounting teenage dating violence in contrast to 35.2 percent who had no history of CSA. Teenage dating violence, in turn, was strongly linked to adult intimate partner violence, $\chi^2(df\ 1) = 46.61$, $p < .0001$. Most women who revealed teenage dating violence also entered violent adult relationships (65.87 percent) as opposed to women who did not recount teenage dating violence (34.1 percent). Of particular concern was whether early exposure to gender-based violence increased vulnerability in adulthood. To test this hypothesis an adjusted logistic regression analysis was performed with CSA as the explanatory independent variable and IPV in adulthood as the outcome. As shown in Table 1, CSA strongly predicted women's later exposure to IPV with an adjusted Odds Ratio of 6.71 (CI = 3.36 to 13.41), $p < .0001$.

We first performed unadjusted and adjusted regressions modeling each form of gender-based violence (CSA, teen dating violence, IPV, and sexual assault) to predict whether women's abortion. Overall, the relation between the independent risk variables and abortion was weak or absent in these models except in the case of teenage dating violence showing only a trend for an adjusted odds ratio predicting abortion of 1.52, $p = .09$. Furthermore, demographic covariates were unrelated to the probability of having an abortion when entered simultaneously with different forms of gender-based violence. Childhood trauma scores did predict teenage dating violence but no other forms of gender-based abuse.

We next tested whether a cumulative score for gender-based violence predicted abortion. Logistic regressions confirmed that the cumulative gender-based violence score predicted having an abortion (see Table 2).

Table 2. Logistic regression models testing the association of gender-based cumulative risk and abortion likelihood.Unadjusted Model 1

	Odds Ratio (OR)	Lower	Upper	p-value
Cumulative risk score	1.5	1.26	1.8	< .0001

Adjusted Model 2

Cumulative risk score	1.388	1.13	1.69	.00
Childhood trauma	1.02	.99	1.05	.16
Age	.99	.97	1.02	.74
Race (African-American)	1.358	.83	2.21	.22
High school graduate	.755	.41	1.4	.37

**Figure 1.** Percent of women who disclose abortion based on the number of different gender-based violence events across their life-course.

The overall odds in the adjusted model was 1.388 (CI = 1.13, 1.69), $p = .0012$, controlling for childhood trauma other than sexual abuse. Every unit increase in gender-based violence exerts an exponential effect on the odds of abortion > 1 : In the unadjusted model gender-based violence raises the odds of an abortion 50 percent and in the adjusted model 38 percent (Table 2). Figure 1 illustrates the cumulative frequency of women having an abortion plotted against any given score on the cumulative gender-based violence index (0 to 4). As can be seen approximately 35 percent of women with no GBV history sought an abortion, with steep increases after experiencing even one form. Nearly all women with four risk indicators had an abortion.

DISCUSSION

Our findings show first that there is continuity between different forms of gender-based violence across the life-course with child sexual abuse forecasting adolescent and adult dating violence, and adolescent dating violence highly related to intimate partner violence in adulthood. Because each form of abuse is so interrelated it is inadvisable to include them within the same statistical model due to concerns of collinearity among predictor variables. Examining whether each form of abuse treated separately influences the likelihood of abortion yielded few positive findings except in the case of teenage dating violence: Women who recounted having a physically abusive part-

ner before the age of twenty showed a trend towards a higher likelihood of having an abortion at some point in time. But the catalogue of abuse which profiles long-term exposure that emerged for some of the women provides new insights into how gender-based violence can be destructive to women's reproductive freedom and health.

When gender-based violence events across the life-course are added to form a categorical index a cumulative effect on abortion likelihood surfaces. The effect on abortion likelihood of accumulated GBV victimization exceeds that of non-sexual childhood trauma and demographic covariates. Such a finding suggests a new framework with which to study the intersection of gender-based violence and health. Indeed, a dose-response gradient when multiple forms of abuse are incorporated, and nearly all women who have had four gender-based violence events have had an abortion. The findings echo the patterns reported by the authors of the Adverse Childhood Experiences survey of patients in the California Kaiser Permanente HMO [26]. In their large scale surveys the authors find that patients who report four or more adverse childhood events, including sexual abuse and exposure to domestic violence, are over-represented in clinical populations for a wide variety of diseases which anticipate for some premature mortality. Women report especially in qualitative studies ways in which their partners exercise control over their reproductive freedom, which include including forced sex, obstructing women's choice to use birth control through either barrier or pharmaceutical methods, expressing the intent to impregnate women with unplanned and unwanted conception, and, in some cases, pressuring women to have an abortion when she does not want to [21-23]. In other words gender-based violence frequently encompasses women's reproductive functions; men's control over this dimension is an essential corollary to intimate partner abuse and sexual assault [22]. Although only one in a hundred women seek an abortion as the direct result of rape, a much higher proportion have a long history of gender-based violence.

Limitations

Although efforts were made to solicit participants from a large sample of survey respondents and to minimize sampling bias, the costs of obtaining a wholly random sample were prohibitive. Therefore, despite efforts to select participants through a randomized process, women with known abuse histories were mainly self-selected. All time points and incidents are based on retrospective reports from a single respondent and therefore subject to women's memory lapses and reconstruction. Although forgetting past child sexual abuse and assault is not uncommon [31] forgetting the "dependent variable" of abortion seems improbable since women are asked routinely about terminated pregnancies in medical examinations enabling rehearsal of the source event and, in any case, having an abortion is a salient and singular event.

CONCLUSIONS

The World Health Organization (WHO) states that "reproductive health...implies that people are able to have a responsible, satisfying and safe sex life and that they have the capability to reproduce and the freedom to decide if, when and how often to do so." [18]. Women in abusive relationships often lose fundamental control over when and with whom they become pregnant. Healthcare providers potentially can offer referrals which for some women may be a lifeline to safety and recovery. Despite recommendations for universal screening, in practice, it appears that relatively few physicians screen for IPV [32]. For instance, in a survey of 400 California physicians, only 10 percent reported routinely screening new patients for IPV and 9 percent reported routine screening during checkups [33]. Our findings show that abortion is strongly associated with gender-based violence even when adjusting for childhood trauma and demographic characteristics. Medical providers play a central role in educating women about permanent contraception and influencing decision-making [32,34]. For example, recent work demonstrated that an IPV intervention in a family planning setting reduced reproductive coercion [35]. The relationship of IPV to reproductive health creates a clinical opportunity for intervention for IPV. Increasingly health care providers are expected to assess the risk of gender-based violence victimization in their patients, although controversy exists as to the benefits of physician "screening." The American College of Obstetrics and Gynecology have formally recognized the need to address intimate partner violence as contributing to women patients' health. Health care providers would benefit with more information about their patients' past history of abuse in part to ensure that counseling is made available. The role of past sexual abuse and teen dating violence in teenage girls' repeat pregnancies creates a further treatment incentive to incorporate violence assessment and prevention into clinical care. Our findings show that asking about a single dimension of abuse during a circumscribed time period may be insufficient to detect the embedded, long-term consequences of gender-based violence.

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REFERENCES

1. Convention on the Elimination of all forms of discrimination against women. (CEDAW) United Nations [Internet]. Available from: <http://www.un.org/womenwatch/daw/cedaw/cedaw.htm>
2. Bolen RM, Scannapieco M. Prevalence of child sexual abuse: A corrective metanalysis. *Social Service Review*. 1999;73(3):281-313.
3. Espelage DL, Low SK, Anderson C, De La Ru, MA. Bullying, Sexual, and Dating Violence Trajectories From Early to Late

- Adolescence; 2014: 62-77. National Institute of Justice, doc 246830.
4. Pallitto CC, García-Moreno C, Jansen HA, Heise L, Ellsberg M, Watts C. Intimate partner violence, abortion, and unintended pregnancy: Results from the WHO multi-country study on women's health and domestic violence. *Int J Gynaecol Obstet.* 2013;120(1):3-9.
 5. Centers for Disease Control. Sexual violence data source/report [Internet]. 2015. Available from: <http://www.cdc.gov/violenceprevention/sexualviolence/datasources.html>
 6. Garcia-Moreno C, Watts, C. Violence against women: an urgent public health priority. *Bull World Health Organ.* 2011;89(1):2.
 7. Coker AL, Davis KE, Arias I, Desai S, Sanderson M, Brandt HM, et al. Physical and mental health effects of intimate partner violence for men and women. *Am J Prev Med* 2002;23:260-8
 8. Vos T, Astbury J, Piers LS, Magnus A, Heenan M, Stanley L. Measuring the impact of intimate partner violence on the health of women in Victoria, Australia. *Bull World Health Organ.* 2006;84:739-44.
 9. Finer LB, Frowirth LA, Dauphinee SS, Moore, AM. Reasons US women have abortions. *Perspect Sex Reprod Health.* 2013;37(3):110-118.
 10. McCloskey LA, Lichter E, Gan ML, Williams CM, Gerber MR, Sege R, Herbert B. Intimate partner violence and patient screening across medical specialties. *Acad Emerg Med.* 2005;12(8):712-722.
 11. Gerber MR, Wittenberg E, Ganz ML, Williams CM, McCloskey LA. Intimate partner violence exposure and change in women's physical symptoms over time. *J Gen Int Med.* 2008;23(1):64-69.
 12. Boyer D, Fine D. Sexual abuse as a factor in adolescent pregnancy and child maltreatment. *Fam Plann Perspect.* 1992;24(1):4-19.
 13. Jacoby M, Gorenflo D, Black E, Wunderlich C, Eyler AE. Rapid repeat pregnancy and experiences of interpersonal violence among low-income adolescents. *Am J Prev Med.* 1999;16(4):318-321.
 14. Buelna C, Ulloa EC, Ulibarri MD. Sexual relationship power as a mediator between dating violence and sexually transmitted infections among college women. *J Interpers Violence.* 2009;24(8):1338-1357.
 15. Silverman JG, Decker MR, McCauley HL, Gupta J, Miller E, Raj A, et al. Male intimate partner violence perpetration and involvement in abortions and abortion-related conflict. *Am J Public Health.* 2010;100(8):1415-1417.
 16. Silverman JG, Decker MR, Reed E, Raj A. Intimate partner violence victimization prior to and during pregnancy among women residing in 26 US states: associations with maternal and neonatal health. *Am J Obstet Gynecol.* 2006;195(1):140-148.
 17. World Health Organization report, 2015 [Internet]. Available from: http://www.who.int/topics/reproductive_health/en/
 18. Glander SS, Moore ML, Michielutte R, Parsons L. The prevalence of domestic violence among women seeking abortion. *Obstet Gynecol.* 1998;91:1002-1006.
 19. Williams CM, Larsen U, McCloskey LA. Intimate partner violence and women's contraceptive use. *Violence Against Women.* 2008;14(12):1382-1396.
 20. Maxwell L, Devries K, Zions D, Alhusen JL, Campbell J. Estimating the effect of Intimate Partner Violence on women's use of contraception: A systematic review and meta-analysis. *PLoS One.* 2015;10(2):e0118234.
 21. Schoenwald P, Silverman JG. Pregnancy coercion, intimate partner violence and unintended pregnancy. *Contraception.* 2010;81:316-322.
 22. Miller E, Decker MR, McCauley HL, Tancredi DJ, Levenson RR, Waldman J. et al. Pregnancy coercion, intimate partner violence and unintended pregnancy. *Contraception.* 2010;81:316-322.
 23. Silverman, JG, Raj A, Clements K. Dating violence and associated sexual risk and pregnancy among adolescent girls in the United States. *Pediatrics.* 2004;114(2):e220-e225.
 24. Elliott, DM, Mok DS, Briere J. Adult sexual assault: Prevalence, symptomatology, and sex differences in the general population. *J Trauma Stress.* 2004;17(3):203-211.
 25. Exner-Cortens D, Eckenrode J, Rothman E. Longitudinal associations between teen dating violence victimization and adverse health outcomes. *Pediatrics.* 2013;131(1):71-78.
 26. Felitti VJ, Anda RF, Nordenberg D, Williamson DF, Spitz AM, Edwards V, Marks JS. Relationship of childhood abuse and household dysfunction to many of the leading causes of death in adults: The Adverse Childhood Experiences (ACE) Study. *Am J Prev Med.* 1998;14(4):245-258.
 27. Bernstein DP, Fink L, Handelsman L, Foote J, Lovejoy M, Wenz K, et al. Initial reliability and validity of a new retrospective measure of child abuse and neglect. *Am J Psychiatry.* 1994;151:1132-1136.
 28. Testa M, VanZile-Tamsen C, Livingston JA, Koss MP. Assessing women's experiences of sexual aggression using the Sexual Experiences Survey: Evidence for validity and implications for research. *Psych of Women Q.* 2004;28(3):256-265.
 29. Straus MA, Hamby SL, Boney-McCoy S, Sugarman DB. The revised conflict tactics scales (CTS2) development and preliminary psychometric data. *J Fam Issues.* 1996;17(3):283-316.
 30. Smith PH, Earp JA, DeVellis R. Measuring battering: development of the Women's Experience with Battering (WEB) Scale. *Women's Health.* 1995;1(4):273-288.
 31. Williams LM. Recall of childhood trauma: a prospective study of women's memories of child sexual abuse. *J Consulting Clin Psych.* 1994;62(6):1167-1174.
 32. Rodriguez MA, Bauer HM, McLoughlin E, Grumbach K. Screening and intervention for intimate partner abuse: practices and attitudes of primary care physicians. *JAMA.* 1999;282:468-74.
 33. Nelson HD, Bougatsos C, Blazina I. Screening Women for Intimate Partner Violence and Elderly and Vulnerable Adults for Abuse: Systematic Review to Update the 2004 U.S. Preventive Services Task Force Recommendation. Rockville, MD AHRQ [Internet]. 2012; 12-05167-EF-1. Available from: <http://www.ncbi.nlm.nih.gov/books/NBK97297/>
 34. Schreiber CA, Harwood BJ, Switzer GE, Creinin MD, Reeves MF, Ness RB. Training and attitudes about contraceptive management across primary care specialties: a survey of graduating residents. *Contraception.* 2006;6:618-622.
 35. Miller E, Decker MR, McCauley HL, et al. A family planning clinic partner violence intervention to reduce risk associated with reproductive coercion. *Contraception.* 2011;83:274-280.